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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10:007,026      | 11 05 2001  | Johnny R. Brezina    | AUS920010591US1     | 2404             |

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Intellectual Property Law Dept.  
IBM Corporation  
11400 Burnet Road, Zip 4054  
Austin, TX 78758

EXAMINER

CHAMBLISS, ALONZO

ART UNIT PAPER NUMBER

2827

DATE MAILED: 05-06-2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/007,026             | BREZINA ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Alonzo Chambliss       | 2827                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 11/5/01 in Paper No. 2 was filed before the mailing date of the non-final rejection on 5/4/03. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-7, 10, 11, 13-17, 20, and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kim et al. (U.S. 6,492,698).

With respect to Claims 1, 7, 11, 17, and 21, Kim teaches a heat sink 210, the heat sink 210 having a heat sink vertical portion and a heat sink horizontal portion, the heat sink vertical portion being oriented about 90 degrees from the heat sink horizontal portion. The heat sink 210 removes heat thermally connected to the vertical and horizontal block. A forward vertical carrier 230 having an optical converter 240, the

Art Unit: 2827

forward vertical carrier 230 being attached to the heat sink vertical portion. The second portion of 230 serves a rearward horizontal block, the rearward horizontal block being attached to the heat sink horizontal portion. A flexible circuit 304 operably connected between the forward vertical carrier and the rearward horizontal block, wherein the flexible circuit 304 having a plurality of electrical layers (see col. 5 lines 5-29 and col. 7 lines 6-15; Figs. 2-5).

With respect to Claims 3, 4, 13, 14, 23, and 24, Kim teaches wherein the optical converter 240, 430 is a laser or photodetector (i.e. lens) (see col. 5 lines 5-12 and col. 6 lines 30-42).

With respect to Claims 5, 6, 15, 16, Kim teaches an electronic component die (i.e. laser array) 430 thermally connected to the forward and rearward horizontal block 230 by the flexible circuit (see col. 6 lines 30-42; Figs. 2-4).

With respect to Claims 10 and 20, Kim teaches a lens housing assembly 250 aligning an optical lens 240 with optical converter (see col. 5 lines 5-11; Figs. 2 and 5).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 2827

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 8, 9, 12, 18, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. 6,492,698) as applied to claims 1, 11, and 21 above, and further in view of Giboney et al. (U.S. 6,318,909).

With respect to Claims 2, 8, 12, 18, and 22, Kim discloses that the construction (i.e. the type of layers of the circuit) is well known to those of ordinary skill in the art. Thus, it is well known that the plurality of layers consist of a power layer, a ground layer, and a signal layer as evident by Giboney (see col. 9 lines 1-10). Thus, the forward vertical carrier 230 has a component face, wherein the component face has a ground land and a power land in the plane of the component face since the flexible circuit 304 is on the component face of the vertical carrier 230.

With respect to Claims 9 and 19, Kim discloses a laser die 430 of an array of lasers attached to the ground land and a photodetector die 240 attached to the power land, since the laser die needs a ground land for protection of the circuitry in the system and a photodetector die relies on power land to generate a response from incoming light sources.

displacement between them (see Specification, pages 3-5; Fig. 5).

The prior art made of record and not relied upon is cited primarily to show the product of the instant invention.

***Conclusion***

6. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for this Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956

AC/May 4, 2003



Alonzo Chambliss  
Patent Examiner  
Art Unit 2827